

Listing of Claims

The listing of claims below will replace all prior versions and listings of claims in the application:

Claim 1. (currently amended) A particulate neutralization system comprising:

(a) a duct having an exterior surface with a first opening and a second opening and an interior volume through which an air stream is directed;

(b) a lamp having at least one ultraviolet tube therein, said lamp fixed to said exterior surface over said first opening;

(c) an optically transmissible element secured to said duct between said lamp and said interior volume so as to prevent said air stream from contacting said ultraviolet tube; and

(d) a light panel comprising a frame and a porous mat attached to said frame, said light panel slidably disposed through said second opening, removably secured to said duct and bisecting said air stream, said porous mat composed of a plurality of end emitting optical fibers, said end emitting optical fibers disposed within said porous mat in a random and non-parallel arrangement, a first end of each said end emitting optical fiber disposed towards said lamp with said optically transmissible element there between, a second end of each said end emitting optical fiber terminating and disposed within said porous mat so as to communicate a plurality of ultraviolet beams within said porous mat to form a field through which said air stream passes.

Claim 2. (original) The particulate neutralization system of claim 1, wherein said optically transmissible element is a lens.

Claim 3. (original) The particulate neutralization system of claim 1, further comprising a pre-

filter upstream from said light panel.

Claim 4. (original) The particulate neutralization system of claim 1, further comprising a post-filter downstream from said light panel.

Claim 5. (currently amended) The particulate neutralization system of claim 1, wherein said first end of each said end emitting optical ~~fibers~~ fiber ~~has-a~~ is lens shaped.

Claim 6. (currently amended) The particulate neutralization system of claim 1, wherein said second end of each said end emitting optical ~~fibers~~ fiber ~~has-a~~ is lens shaped.

Claim 7. (currently amended) A particulate neutralization system comprising:

- (a) a duct having an exterior surface and an interior volume through which an air stream is directed;
- (b) at least two lamps each having at least one ultraviolet tube therein, said lamps fixed to said exterior surface with each over an opening in said duct;
- (c) at least two optically transmissible elements wherein one said optically transmissible element is secured to said duct between each said lamp and said interior volume so as to prevent said air stream from contacting said ultraviolet tubes; and
- (d) a light panel comprising a frame and a porous mat attached to said frame, said light panel slidably disposed into said interior volume, removably secured to said duct and bisecting said air stream, said porous mat composed of a plurality of end emitting optical fibers, said end emitting optical fibers disposed within said porous mat in a random and non-parallel arrangement, a first end of each said end emitting optical fiber disposed towards one said lamp with one said optically transmissible element there between, a second end of each said end emitting optical fiber terminating and disposed within said porous mat so as to

communicate a plurality of ultraviolet beams within said porous mat to form a contiguous field through which said air stream passes.

Claim 8. (original) The particulate neutralization system of claim 7, wherein said optically transmissible element is a lens.

Claim 9. (original) The particulate neutralization system of claim 7, further comprising a pre-filter upstream from said light panel.

Claim 10. (original) The particulate neutralization system of claim 7, further comprising a post-filter downstream from said light panel.

Claim 11. (currently amended) The particulate neutralization system of claim 7, wherein said first end of each said end emitting optical ~~fibers~~ fiber has-a is lens shaped.

Claim 12. (currently amended) The particulate neutralization system of claim 7, wherein said second end of each said end emitting optical ~~fibers~~ fiber has-a is lens shaped.

Claim 13. (currently amended) A particulate neutralization system comprising:

- (a) a duct having an exterior surface and an interior volume through which an air stream is directed;
- (b) at least two lamps each having at least one ultraviolet tube therein, said lamps fixed to said exterior surface with each over an opening in said duct;
- (c) at least two optically transmissible elements wherein one is secured to said duct between each said lamp and said interior volume so as to prevent said air stream from contacting said ultraviolet tubes; and
- (d) at least two light panels each comprising a frame and a porous mat attached to said frame, said light panels slidably disposed into said interior volume, removably secured to said duct

and bisecting said air stream, each said porous mat composed of a plurality of end emitting optical fibers, said end emitting optical fibers disposed within said porous mat in a random and non-parallel arrangement, a first end of each said end emitting optical fiber disposed towards at least one said lamp with one said optically transmissible element there between, a second end of each said end emitting optical fiber terminating and disposed within one said porous mat so as to communicate a plurality of ultraviolet beams within said porous mat to form at least one field through which said air stream passes.

Claim 14. (original) The particulate neutralization system of claim 13, wherein at least one said optically transmissible element is a lens.

Claim 15. (original) The particulate neutralization system of claim 13, further comprising a pre-filter upstream from said light panels.

Claim 16. (original) The particulate neutralization system of claim 13, further comprising a post-filter downstream from said light panels.

Claim 17. (original) The particulate neutralization system of claim 13, further comprising an intermediate-filter disposed between two said light panels.

Claim 18. (currently amended) The particulate neutralization system of claim 13, wherein said first end of each said end emitting optical ~~fibers~~ fiber ~~has a~~ is lens shaped.

Claim 19. (currently amended) The particulate neutralization system of claim 13, wherein said second end of each said end emitting optical ~~fibers~~ fiber ~~has a~~ is lens shaped.

Claim 20. (withdrawn) A particulate neutralization method comprising the steps of:

- (a) communicating a plurality of ultraviolet light beams into an air stream;
- (b) coupling said ultraviolet light beams into a field;

(c) passing said air stream through said field; and

(d) exposing a plurality of particulates within said air stream to said field.

Claim 21. (currently amended) A light panel for neutralizing particulates within an air stream comprising:

(a) a frame; and

(b) a porous mat composed of a plurality of end emitting optical fibers attached to said frame, said end emitting optical fibers disposed within said porous mat in a random and non-parallel arrangement, a first end of each said end emitting optical fiber disposed within said frame so as to receive light from a light source, a second end of each said end emitting optical fiber terminating and disposed within said porous mat so as to communicate a plurality of ultraviolet beams within said porous mat to form a field.